

Public Reporting Technical Expert Panel (TEP)

FINAL REPORT

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I. Executive Summary

Since the introduction of public reporting legislation in 1998, Rhode Island has publicly reported healthcare quality data for four healthcare settings or topics and is currently working on a fifth. To help inform the future direction of its public reporting program, the Rhode Island Department of Health (HEALTH) convened a Public Reporting Technical Expert Panel (TEP) to evaluate public reporting efforts to date and comment on the future direction of the program. During their one-day meeting, TEP members discussed four topic areas: (1) comparing healthcare providers; (2) using longitudinal data; (3) creating composite measures; and (4) ensuring consumer data accessibility. Results of the discussion indicate that:

- Methods for group comparison should include empirical goals or thresholds for high quality, rather than relying on means or other distribution-based metrics which may not reflect high quality. Methods for comparison can differ by healthcare setting; these differences should not impede consumer comprehension of the results.
- The use of longitudinal data is preferable and data report formats should make it easy for healthcare consumers and providers to trend results over time. HEALTH, which currently relies on cross-sectional documents, may consider adopting interactive formats to better facilitate comparison of results over time.
- Composite measures, though desirable for ease of use, may obscure true differences and may confuse consumers who wrongly assume all facets of quality have been quantified. Composites should be used cautiously and restricted to the same service line and/or clinical domain. Composite measures may be more feasible in the future with the adoption of electronic health records (EHRs).
- When considering public reporting formats, use cognitive or consumer testing to ensure to ensure that data are meaningful and actionable for their target audiences (e.g., healthcare consumers and providers). The report design should adhere to recommendations for consumers, including limiting the number of colors and key message points.

Following the Public Reporting TEP, Qualidigm and Quality Partners formulated the following recommendations to HEALTH. HEALTH should:

- Continue to use and/or develop comparison methods with statistical and face validity for each healthcare setting;

- Consider creating comparison groups based on empirical goals or thresholds;
- Explore options for creating interactive public reporting formats that include the ability for users to trend results over time;
- Continue to use and/or create composite measures within service line or clinical domain;
- Encourage the use and continued adoption of EHRs, which will greatly enhance data availability and comprehensiveness for public reporting purposes; and
- Evaluate current and future public reporting formats to ensure they reflect expert recommendations for format (e.g., color, key message points).

The following final report summarizes the meeting's discussion and provides Qualidigm and Quality Partners' resultant recommendations to HEALTH.

II. Background

Rhode Island is a pioneer in the public reporting of healthcare quality data. In 1998, the State of Rhode Island mandated that HEALTH develop a healthcare quality public reporting system for all licensed healthcare facilities.¹ Under the legislation, the Health Care Quality Performance Measurement and Reporting Program (HCQP) must publicly report both clinical and patient satisfaction data with the objectives of informing both consumer choice and also quality improvement efforts. Since 1998, the HCQP has public reported quality data for: hospitals; nursing homes; home health agencies; and dialysis centers. Community health indicators are currently in development; future efforts will expand Rhode Island public reporting to other licensed healthcare facilities in the State, as selected by the Director of HEALTH in consultation with the HCQP Steering Committee.

The hospital setting was the first healthcare setting to publicly report data; these were satisfaction data selected by the Hospital Measures Subcommittee and first reported in 1999. Reflecting on this inaugural process on October 24, 2005, David Gifford, MD, MPH, Director of HEALTH, noted that half of the Subcommittee's time was devoted to selecting a vendor and choosing what measures to report. The other half of the time was consumed with addressing questions such as: How often do we report the data? How do we present it? How do we compare providers? These public reporting "how to" questions have persisted across settings and since 1999.

Now that the HCQP has nearly eight years of public reporting experience and expertise, HEALTH decided to convene 10 public reporting experts and stakeholders to discuss the direction of Rhode Island's public reporting program. (See Appendix A for the TEP member list and Appendix B for TEP members' biographies.) The Public Reporting Technical Expert Panel (TEP), held in partnership with Qualidigm (of Connecticut) and Quality Partners of Rhode Island ("Quality Partners"), asked TEP members to:

- (1) Evaluate Rhode Island's public reporting efforts to date; and
- (2) Provide recommendations to HEALTH about the future direction of the program.

The Public Reporting TEP provided a forum for HEALTH to gather feedback and encourage discussion about residual "how to" public reporting questions in a systematic manner. Participants were asked to focus their debate and discussion on four areas of public reporting:

1. Comparing healthcare providers;
2. Using longitudinal data;

3. Creating composite measures; and
4. Ensuring consumer data accessibility.

(See Appendix C for the meeting agenda and Appendix D for the accompanying topic guide.)

HEALTH asked TEP participants to focus on how data should be used and presented; measurement biases and measure construction were not topics of discussion. Now that HEALTH has identified data and measures for four settings, the TEP focused on the “how to” questions (previous page).

The purpose of this report by Qualidigm and Quality Partners is: to describe the Public Reporting TEP; present the TEP’s discussion results; and, using the results, propose recommendations for HEALTH’s consideration in future public reporting efforts.

III. Meeting methodology

In September 2005, HEALTH’s Oversight Committee—comprised of HEALTH, Qualidigm, and Quality Partners staff—identified public reporting experts and stakeholders for inclusion in the Public Reporting TEP. Eighteen experts and stakeholders received invitations and, ultimately, 10 participated in the one-day meeting on October 24, 2005.

A. Preparation

Prior to the meeting, TEP members were asked to review the agenda and accompanying discussion questions (Appendices C and D) in order to:

- Be prepared to share and debate their views;
- Think through the discussion questions and prepare their responses; and
- Identify topics and/or discussion items of interest from their perspectives.

Because the TEP was composed of a diverse group of people with interests in a variety of public reporting aspects (data, consumers, etc.) and healthcare settings, project staff recognized that participants brought multiple talents and perspectives to the discussion. As a result, project staff did not assign TEP members to specific topics. Instead, TEP members were asked to actively participate in discussion for all four topics.

If TEP members identified topics or discussion items of particular interest to them, project staff encouraged them to prepare short (2-3 minute) presentations and/or share electronic materials (e.g., reports, journal articles) with project staff. Electronic materials were compiled and shared with meeting participants on CD-Rom.

B. Meeting structure

On October 24th, the meeting opened with a short presentation by the meeting chair, Dr. Gifford, providing background and context for Rhode Island public reporting efforts to date. After Dr. Gifford's presentation, Denise Love, RN, MBA, meeting facilitator, led the discussion. Project staff attended, as did invited audience members from HEALTH, Qualidigm, Quality Partners, and local healthcare organizations. The room was set up to facilitate discussion among TEP members, while also allowing the audience to ask questions and voice opinions at various points in the discussion.

Each agenda item was allotted 75 minutes, and discussion was opened with short presentations (oral or PowerPoint) by Judith Barr, ScD, Vincent Mor, PhD, Yun Wang, PhD and Carol Cronin, MSW, MSG, respectively. Two stenographers were present—one in the morning and a second one in the afternoon—to transcribe the discussion in real-time. (See Appendix E, a separate document, for the complete meeting transcript.)

IV. Discussion Results

Results from the Public Reporting TEP's discussion are summarized below.

Please note: While TEP members did, by and large, agree on the recommendations and results summarized below, the meeting and final report did not ask for TEP members' consensus. This report is not a consensus document and should not be interpreted as such.

A. Topic 1: Comparing healthcare providers

Dr. Barr opened discussion with a short presentation about different local and national methods for comparing hospital patient satisfaction. Dr. Barr described a survey of nine methodologies for measuring and disseminating hospital experience, including some of the varying methodologies used (minimum response rates, benchmarks, comparison groups, etc.).

Dr. Barr also included a graphical representation of the various classification strategies used by HEALTH to report scores and/or assign symbols (one, two, or three diamonds) to hospital, nursing home, and home health providers. In Rhode Island, she noted, different methods have been used for different settings. For example, hospital clinical measures were reported as percentages (no diamonds) with 95% confidence intervals. In contrast, nursing homes were assigned diamonds based on the following method: for each clinical measure, the 25th and 75th

percentile scores are computed for all nursing homes combined. If the 50% confidence interval for the facility's observed score falls below the 25th percentile score (best 25%), the facility receives three diamonds; if the confidence interval falls above the 75th percentile score (worst 25%), the facility receives one diamond; all other facilities receive two diamonds. Varying methodologies for classification can result in different cut-off points and changes in the data presented in public reports.

Following Dr. Barr's presentation, TEP discussion centered on how to: (1) identify true differences; (2) choose comparison groups and/or benchmarks; and (3) incorporate patients' expectation of care.

1. Identifying true differences

The group discussed how to compare providers and identify true differences. At this point in time, Dr. Gifford stressed, HEALTH has already created the measures and determined the numerators, denominators, and minimum response rates; though the measures are not static and *will* change as research does, the TEP's focus needed to be on how to determine true differences and present data in a meaningful way.

Previously, HEALTH identified clinically and statistically significant differences in provider performance (i.e., cut points) based on the distribution of the quality indicator or satisfaction scores. As described in Dr. Barr's presentation, classification methods currently vary by setting.¹ Applying the same methods across settings may not be desirable, because the cut points may force distinctions that are not accurate ("true") reflections of quality. As a result, the TEP agreed that multiple methods are acceptable, so long as the information is presented in a consumer-friendly manner and technical details (i.e., a technical report) are available to those who request them.

Currently, HEALTH assigns one, two, or three diamonds based on three comparison groups (i.e., low, medium, and high performance). Dr. Gifford asked TEP members to evaluate the appropriateness of using three, five, or more comparison groups. Janet Muri, MBA commented that the number of groups may not matter as much as the labels or adjectives each group receives; these labels direct consumers to judgment about a provider's

¹ The hospital clinical measures publicly reported by HEALTH do not currently categorize performance; HEALTH's Web site links to the raw percentages (and state and national averages) available from the Centers for Medicare & Medicaid Services on Hospital Compare.

performance. Cathy Duquette, PhD, commented that consumer testing for the hospital satisfaction data demonstrated that consumers understood three diamonds, but not five. Dr. Duquette recommended using three comparison groups, but continuing to provide detailed technical reports containing raw scores. The technical reports have the benefit of providing detailed information for:

- (1) Healthcare providers and consumers with statistical expertise; and
- (2) Healthcare providers who need further detail for internal quality improvement.

While not every healthcare provider is accustomed to examining data, one of the objectives of public reporting is to engage providers and teach them how to use data feedback to direct their actions. If providers don't understand data, Dr. Duquette commented, part of the public reporting process should involve explaining how to use the information for quality improvement.

The group agreed that the use of three groups is simple and logical; the data are not precise enough to allow HEALTH to make further between-group distinctions. The group recommended continuing to identify low-, medium-, and high-performers and to provide technical reports.

2. Choosing comparison groups and/or benchmarks

Stratification of results can help providers compare themselves to peers; however, HEALTH's ability to stratify may be limited by the number of facilities being compared. Having external comparison groups—for example, national scores—enables Rhode Island providers to compare themselves to the aggregate scores of peers with similar characteristics or case-mix. In addition, if the comparison group is limited to a small number of local providers, it is important to remember that the comparison groups are relative, not absolute; there may not be any high-performing providers. If none of the providers are high performers, distinctions may be forced (not meaningful) and also encourage providers to compare their scores to peers whose performance does not represent a gold standard. (It is, therefore, important to educate both providers and consumers about the data and what they mean.)

While data may not be collected uniformly across states, this limitation may be unavoidable. TEP members agreed that, given Rhode Island's small sample sizes, the benefit of external comparison groups outweighs inter-state differences or biases. Jane

Griffin, MPH, suggested that regional comparisons may be desirable; Ms. Griffin's experience is that Rhode Island consumers and providers are most interested in the performance of Rhode Island's adjacent states.

Despite the panel's discussion of external comparison groups, TEP members agreed that distribution-based comparison groups, whether intra- or inter-state, may be less preferable than clinical targets or benchmarks. Comparison based on the current distribution of scores is not preferable for multiple reasons: (1) the measures may evolve as science changes; and (2) current performance may be significantly skewed to high- or low-performance. For example, it may be difficult for healthcare consumers and providers to accurately identify high quality based on the current distribution of scores. A benchmark, by contrast, may be based on clinical practice guidelines or another external marker of quality. Evidence- or consensus-based benchmarks address both of these limitations (changing measures and ability to identify high performance) by enabling providers to aim for a high-performance threshold that is not determined by what providers are currently achieving.

3. Incorporating patient expectation

Discussion about patient satisfaction focused on if and when to incorporate risk-adjustment, with the overall opinion being that risk-adjustment should not be performed. While it may "level the playing field" and allow more direct inter-provider comparison, risk-adjustment may mask important differences between healthcare providers. For instance, the group discussed how patient expectation can impact satisfaction and inter-provider comparisons. One TEP participant argued that expectation—which studies show varies based on socioeconomic status, race, and other patient characteristics—should *not* be taken into account because everyone deserves to have their expectations met, regardless of what those expectations are. From that point of view, comparisons across providers may be valid, even if the providers draw from different patient populations and reflect different levels of expectation.

B. Topic 2: Using longitudinal data

Dr. Mor of Brown Medical School, gave a short presentation about the benefits and uses of longitudinal data. To start, Dr. Mor discussed the importance of understanding who is using the data: consumers; providers; or even purchasers. For example, from healthcare consumers' viewpoint, having the ability to examine trends can help them make an educated guess about

future performance; many consumers hope that the past will predict the future, with a high-performing facility continuing to be high performing. HEALTH should avoid having consumers choose a provider based on a high-performing score one quarter, only to later find that the next quarter's score is extremely poor.²

From a statistical standpoint, longitudinal data allows us to account for the fact that rare events (e.g., clinical outcomes) produce low denominator scores that vary widely from one measurement period to the next (and could lead to the above scenario, where a consumer chooses a provider based on highly variable data). Variation like this can be hard for consumers to understand and interpret. Using longitudinal data, Dr. Mor argued, allows us to “smooth” the data by creating measures that combine various measurement periods. For example, a three-quarter rolling average is a relatively simple method to create a longitudinal measure that is easily presented and interpreted. Methods may be complex, but the presentation and explanation can simple, enabling the target audience to easily understand the data.

TEP discussion focused on how to: (1) present point estimates; (2) aggregate data over time; (3) trend results over time; and (4) improve longitudinal data presentation.

1. Presenting point estimates

Dr. Gifford reminded participants that for the four settings with clinical data currently publicly reported on HEALTH's website (see page 4), HEALTH reports point estimates, with each cross-sectional quarter of data presented in a separate file. Historically, only the most recent quarter of data was included on the website; recently this policy was revised to report multiple quarters of data, although these data are maintained in separate files.³ Each file, therefore, contains a single point estimate for each facility's performance on a specific measure. This requires healthcare consumers and providers to perform their own side-by-side comparison.

Shulamit Bernard, PhD, commented that we often ask healthcare providers and consumers to examine and compare point estimates. With the adoption of longitudinal data, we then ask them to compare (potentially) multiple years of point estimates. Rather than replace the point estimates with trend reports, Dr. Bernard recommended moving towards a

² Because most of HEALTH's publicly reported data are updated quarterly, this report refers to measurement periods as “quarters.”

presentation format that allows the end users to both examine current performance and also overall trends. Users would be able to ask two questions:

- (1) How is the provider performing right now?
- (2) Is the provider improving or worsening over time?

Current performance may or may not incorporate longitudinal data—for example, in a rolling average—but presenting both a current snapshot and also overall trends would enable users to ask both of the above questions and better distinguish between providers.

How can HEALTH trend results? To reduce the burden for end-users, the TEP discussed the fact that alternate report formats—incorporating multiple quarters of data—and/or a more interactive website may better enable healthcare consumers and providers to access and interpret longitudinal data.

2. Aggregating results over time

As described above (“Presenting point estimates”), HEALTH currently reports point estimates and leaves healthcare consumers and providers to trend results independently. At a minimum, the TEP recommended that HEALTH continue providing multiple quarters of data on the website. The TEP was then asked for suggestions about how to aggregate data over time. If HEALTH aggregates data, Ms. Love asked, how many quarters of data should be combined? If too many quarters of data are aggregated, the result may “wash out” what is being measured. Dr. Mor agreed and suggested that between two and four quarters of data may be appropriate. The exact number of quarters aggregated will likely depend on the measure and its stability.

3. Trending results over time

TEP members were initially reluctant to recommend presenting trends, arguing that there are measurement and ascertainment biases in the data, as well as data and measure changes over time. After some discussion, however, Dr. Gifford reminded the TEP that, right now, HEALTH presents the data, but leaves people to make their own conclusions. He emphasized that we know that some of the data are problematic, and we struggle with how to present data over time, but consumers may need HEALTH to present the information in a way that allows them to determine whether a provider’s performance is improving or

³ The exception to this method is home health; HEALTH reports home health data quarterly as a rolling annual score.

worsening. Right now, the “burden of interpretation” is on the consumer—and the consumer may not be knowledgeable enough to understand the data and their message. After discussion, the TEP agreed that—despite limitations—it makes sense to identify an innovative way to present the data, in an effort to better serve consumers’ needs.

TEP members suggested continuing to report point estimates, but doing a lot of back-end work to incorporate trends and make data easily interpreted (e.g., to create “digestible chunks of information”). For example, HEALTH might consider presenting data in terms of improvement (or lack thereof) to make it easy for consumers to understand what they see. One way to accomplish this would be to use a symbol, or “visual clue,” to identify whether the current quarter’s data were better or worse than the previous quarter’s data. Alternately, Dr. Bernard suggested a model based on *The New York Times*’ Bestseller list, for example, including the number of weeks that a provider has remained in a particular performance category. This method could be combined with a benchmark to flag providers that have achieved high-performance using the benchmark as a threshold or cut-off point. As discussed in “Topic 1: Comparing healthcare providers,” using a benchmark would encourage providers to aim for a pre-defined standard of care.

When asked about the length of time that data should appear on the website, TEP participants voted for three years. With quarterly data, three years involves 12 data points, long enough to show trends but involving data that is recent enough to be relevant to current quality. Given the fact that all publicly reported data are retrospective and have a lag-time before they are made available, providing several years of longitudinal data is logical and may help consumers make educated guesses about current and future performance. Dr. Mor suggested asking consumer focus groups for input on this point.

4. Improving longitudinal data presentation

One of the TEP members commented that—although longitudinal data may be preferable—neither cross-sectional nor longitudinal data are useful for purchasers or consumers unless they are presented in a user-friendly format. For example, data publicly reported by the Centers for Medicare & Medicaid Services (CMS) are presented in “raw” form (i.e., percentages) and may not easily inform decision-making. Discussion focused on the necessity of involving providers during the presentation selection process, to ensure that the selected format makes sense to them and will enable them to use the data for their internal purposes, as well as in helping and informing consumers. (Report format and data

presentation, while explicitly discussed in “Topic 4: Consumer data accessibility,” arose repeatedly throughout the day’s discussions.)

C. Topic 3: Creating composite measures

Dr. Wang gave a presentation about composite measures, illustrating a simple method used by Qualidigm in a physician’s office setting project. In Dr. Wang’s example, opportunity scores are calculated based on processes of care; each composite measure is equal to the number of times the physician provided the recommended care processes divided by the total number of opportunities to provide the care processes. As with other methods to create composite measures, this method poses several analytic questions and challenges, including the impact of provider volume on composite measure scores and the minimum denominator size (i.e., number of opportunities) required to accurately identify high- or low-performance, and to discriminate between providers.

Following Dr. Wang’s presentation, the TEP discussed how to: (1) create methodologically appropriate composite scores; (2) identify meaningful composites; and (3) present composite measures accurately.

1. Creating methodologically appropriate composite measures

TEP members commented that composite measures are intuitive and “make sense” to consumers; while many people have very specific clinical conditions, Dr. Gifford noted that their overall health and chronic diseases are likely to change over time, so overall measures of quality may be useful. Laurel Pickering, MPH, speaking on behalf of purchasers and healthcare plans, said that composite measures are ideal for her audience, but she understands that they are difficult to create. Nevertheless, she recommended working to identify whatever is feasible, rather than waiting for the “perfect” data and measure. Sometimes good is good enough, she said; it’s better to put information out there while we perfect the measures and data.

Only one healthcare setting, hospitals, has experience using a composite measure. As a member of HEALTH’s Hospital Measures Subcommittee, Dr. Duquette described her experiences with composites. The hospital composites were constructed using a methodology similar to the one Dr. Wang described, with “opportunities” summed. Dr. Duquette recalled a Hospital Subcommittee debate about whether all opportunities should

be weighted equally, with final consensus being that every opportunity is an opportunity where care *should* be provided, regardless of what the circumstances are, or how old or sick the patient is. As a result, the hospital composite gave equal weight to all opportunities.

Based on Dr. Wang's presentation, TEP members agreed that is fairly easy to identify simple, logical methods for creating composite measures (e.g., by aggregating opportunities or scores). However, the validity of such methods may be questionable; though composite measures based on the same service line or clinical domain (e.g., process of care measures related to a single clinical outcome) have face validity, measures created across service lines or clinical topics may not be desirable. It is not clear that aggregating current measures for nursing homes, for example, would be valid across clinical domains (pain, pressure ulcers, etc.). Dr. Mor argued that such composite measures may be based on process measures with different structural components (such as location) that may make comparisons illogical.

2. Identifying meaningful composites

TEP members repeatedly mentioned the need to present simple and easily explainable data. For instance, it is important that composite measures—if calculated—do not imply that HEALTH has captured more information than it actually has. Combining data may be a disservice if the results are no longer meaningful or actionable to the public. In hospitals, Dr. Duquette cautioned, aggregating data to the facility level can “water down” the composite and its utility. Instead of composite measures, the TEP suggested that consumers may benefit more from education to help them understand *which* quality measure is most relevant to their own medical histories.

Additionally, the TEP discussed HEALTH's need to work within the confines of readily available and accessible data. As stated above, composite measures within service line or clinical domain have more face validity than composite measures calculated across service line or clinical domain, but these data may not be readily available across settings. Resources for creating new measures are scarce, so HEALTH needs to identify feasible composite measures calculated based on existing data and measures. The measures currently reported by HEALTH have been limited by lack of resources to collect data; unless electronic health records (EHRs) are widely adopted by Rhode Island healthcare

providers, the availability of electronic data will be limited. The TEP recommended that HEALTH continue to work with providers to encourage the adoption of EHRs.⁴

In addition to having greater face validity, composites derived from data from a single service line or clinical condition may be more meaningful to consumers and amenable to quality improvement by the provider. In the hospital setting, for example, Dr. Duquette cautioned that experience shows wide variation in quality from one clinical condition to another. Dr. Gifford agreed, citing statistics that show 85% of nursing homes nationwide have at least one measure in the top (best) quartile and one in the bottom (worst) quartile. Aggregating across measures, or clinical outcomes, can therefore obscure true differences. In the end, such composites may prove less useful and actionable to healthcare consumers (who often have very specific needs) than the separate measures currently reported by HEALTH.

One TEP member asked the group to consider the following question: are there ways to measure aspects of care that are important to all patients, regardless of medical condition or healthcare setting? The group agreed that composite measures reflecting crosscutting topics (such as patient safety), not multiple clinical domains, have face validity and seem logical.

3. Presenting composite measures meaningfully

Jeanne McGee, PhD, reminded the TEP that visitors to HEALTH's website are not representative of Rhode Islanders as a whole; rather, they are people willing and able to look at data. Nevertheless, overall consensus is that HEALTH has the responsibility to present data that are relevant to all healthcare consumers and further encourage consumers—even those who are not familiar with data—to use the publicly reported information in their healthcare decision-making processes.

Discussion turned to ways to present composites meaningfully, with the caveat, again, that it is important that consumers do not interpret composite measures as comprehensive measures that capture every aspect of care, i.e., more than the sum of their parts. Using an interactive format may be desirable because consumers would then have the ability to “drill down” to detailed information. This would allow them to: (1) determine exactly what components are included in a composite; and (2) access specific, actionable information.

⁴ To be applicable and useful for public reporting and public health purposes, EHRs may need to be structured to capture and share data for purposes other than patient care.

Ideally, Ms. Muri commented, these components should involve care delivery about which consumers have choices.

Dr. Mor voiced his ambivalence about providing *only* composite measures, because quality can be largely attributed to different production functions—for example, different physical locations in the healthcare provider’s office. Different structures, processes, and mechanisms are at work for different measures. As a result, while composites are desirable, it may be best to provide them in conjunction with the measures currently reported.

Currently, HEALTH presents data on its website in PDF format. TEP members supported the recommendation for an interactive format—providing composites with drill-down capability—because this proposal allowed the best of both worlds: condition- or process-specific data and general, overall information. Dr. Gifford agreed, saying that a “one-size-fits-all” methodology does not adequately represent healthcare and all the facets that contribute to quality.

D. Topic 4: Consumer data accessibility

Ms. Cronin described presentation formats and user guidance for 51 websites with publicly reported hospital data. Where are people already looking for data? Can HEALTH adapt the methods already in place elsewhere? Ms. Cronin described a wide variety of presentations formats, with a majority using percentages (80%), evaluative symbols (71%), interactive features (65%), or bar graphs (61%). Evaluative symbols included (among other options) arrows, checkmarks, diamonds, numbers, and stars, with some websites using combinations of multiple symbols. Even the language used to describe the target audience varied, with descriptions including “patients,” “residents,” “consumers,” and “the public.” A majority of websites included descriptions of the measures (84%), but fewer than half provided FAQs (47%) or glossaries (43%) to aid consumers’ understanding and use of the data.

Oftentimes, Ms. Cronin cautioned, we spend a lot of time thinking about the data source, the measures, and how the measures are constructed, but when it comes to strategizing about how to present the data to people in a way that is intuitive and easy to use, we are hasty. This TEP provides an opportunity to think through consumer data accessibility more thoroughly.

After Ms. Cronin’s presentation, the TEP discussed how to: (1) create data presentation formats; and (2) effectively disseminate data.

1. Identifying data presentation formats

Dr. Duquette commented that the success of the Rhode Island public reporting program is, in part, because the statute provides strict standards for the quality of information that is publicly report. As a result, providers and consumers take the data seriously. However, when presenting data to the public, it is important to employ presentation formats that help consumers understand and use the data. This is particularly important given the fact that many consumers don't have the luxury of taking time to carefully peruse and analyze data; many healthcare decisions are made quickly. According to Dr. Gifford, the data we publicly report are designed and provided in formats that may be easier for the provider to understand and use for quality improvement. As we continue to improve the public program, it is important to remember that (1) the primary audience is consumers and (2) consumers in Rhode Island are unique in some ways. For instance, Dr. Bernard cited conversations with Rhode Island physicians who reported that distance is their patients' primary criterion for choosing a healthcare provider; many Rhode Islanders don't like to travel or even across bridges.

Dr. McGee commented that consumers can and will make distinctions based on the data, but their conclusions may be easier to reach or more meaningful (accurate) if the format is easy to understand. Consumers, she said, need information that looks like it will be simple and easy to use. HEALTH should think about cognitive or consumer testing to: (1) ensure that data are meaningful and actionable to the target audiences (e.g., healthcare consumers and providers); and (2) make sure the report design adheres to recommendations for consumers, including:

- Limiting use of color to several colors;
- Using colors so that people can see a pattern at a glance;
- Formatting font color so that important information is darker (black);
- Using graphic design so that information is visible at a glance; and
- Using no more than five or six key message points.

Conforming to the above principles may help consumers because the report incorporates "front-end design work" that reduces the cognitive burden.

The TEP discussed the need to test presentation formats with focus groups. HEALTH conducted cognitive testing for some of its public reporting formats (e.g., hospital satisfaction), but should continue to test reporting formats each time reports are revised

and/or new settings are added. Dr. McGee reminded TEP members that common formatting, for example using an asterisk to flag a footnote, is not universally understood and interpreted. In addition, symbols are harder for people to understand than information that is highlighted with color or spelled out with self-explanatory words.

2. Disseminating data effectively

Dr. Mor mentioned that, in many cases, healthcare consumers are savvier about the data than providers, since consumers often have very specific questions about quality. However, to have the largest impact, publicly reported data not only needs to reach a wide audience, it needs to reach the *right* (target) audience. The TEP discussed various strategies for data dissemination. For example, where do healthcare consumers look for data? While websites are quick and easy ways to disclose healthcare data, Dr. Barr reminded TEP participants that not all consumers use the Internet. As a result, HEALTH needs to identify “information intermediaries” to help consumers access data; community opinion leaders, employers, and healthcare providers may be effective venues for sharing information. The TEP debated whether physician’s offices are frequented most often—or do elderly patients visit pharmacies on a more regular basis?

In addition to ensuring that data are actionable and relevant to consumers’ immediate health care needs, HEALTH must identify both dissemination venues and tactics (e.g., social marketing) that will reach the target audience effectively. Without further examination of HEALTH’s website statistics, it is unclear whether the current dissemination methods (1) adequately target the appropriate audiences and/or (2) are used frequently by healthcare consumers.

V. Recommendations

The Public Reporting TEP was a forum for public reporting experts and stakeholders to collectively evaluate Rhode Island’s public reporting efforts and provide recommendations about the future direction of the program. It was not, however, a consensus meeting. Subsequently, Qualidigm and Quality Partners have formulated the following recommendations for HEALTH:

- Continue to use and/or develop comparison methods with statistical and face validity for each healthcare setting. The TEP agreed that using different methods in different settings is appropriate and acceptable, so long as complex methods are presented in simple language and are easily understood by the target audience.

- Consider creating comparison groups based on empirical goals or thresholds. Basing comparison groups on external data (e.g., national data sets) will allow HEALTH to identify high-performance and create distinctions that are meaningful.
- Explore options for creating interactive public reporting formats that include the ability for users to trend results over time. Interactive formats may enable healthcare consumers not only to easily trend data over time, but also to “drill down” to actionable information.
- Create composite measures within service line or clinical domain. While the TEP encouraged HEALTH to think critically about composite measures in order to choose composites that logically group data, some composite measures are methodologically appropriate and may help consumers compare cross-setting components of care.
- Encourage the use and continued adoption of EHRs, which will greatly enhance data availability and comprehensiveness for public reporting purposes. HEALTH’s current publicly reported data are limited by data availability; in addition to benefiting consumers by helping ensure inter-provider data continuity, EHRs would enable HEALTH to create additional measures in a cost-effective manner.
- Evaluate current and future public reporting formats to ensure they reflect expert recommendations for format (e.g., color, key message points). Experts recommend testing data reporting formats with focus groups and members of the target audience, to ensure that the data are interpreted consistently and are easily understood. In addition, formatting can help emphasize key points.

VI. Summary

In summary, 10 members of HEALTH’s Public Reporting TEP convened in Providence, RI on October 24, 2005. During a facilitated discussion, TEP members considered Rhode Island’s public reporting efforts to date and provided recommendations about the future direction of the program. Based on the TEP’s discussion, Qualidigm and Quality Partners formulated several recommendations for HEALTH. Recommendations included continuing to use existing comparison methods, while considering comparison groups based on thresholds and ensuring that reporting formats conform to expert suggestions. In addition, Quality Partners and Qualidigm recommend that HEALTH encourage the use and continued adoption of EHRs, which may increase the availability of additional data for public reporting.

VII. References

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APPENDIX A: TEP Member List

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⁵ At the time of the Public Reporting TEP, Dr. Duquette was with the Hospital Association of Rhode Island. Currently, she is Vice President of Nursing and Patient Care Services at Newport Hospital.

APPENDIX B: TEP Members' Biographies

JUDITH K. BARR, ScD

Dr. Barr is a Senior Scientist at Qualidigm. She is currently principal investigator for a project aimed at understanding the barriers and facilitators to mammography use experienced by women with disabilities, funded by the Susan G. Komen Foundation. She led Qualidigm's support for the Rhode Island Department of Health project to measure and publicly report hospital patient satisfaction, including cognitive testing of consumer-focused quality reports and an evaluation of the impact of the public reports on hospital quality improvement. She served as Principal Investigator for a project led by RTI International to interview physicians about their responses to public reports of hospital quality and is working with RTI and Baruch College on an extension of this work. She has also directed several projects at Qualidigm to increase screening mammography use in Connecticut, especially among underserved populations. Her work in these and other areas has been published in professional journals.

Dr. Barr earned her doctorate in Behavioral Sciences and Medical Sociology at the Johns Hopkins University. Prior to joining Qualidigm in 1997, she was research director at the Health Insurance Plan of Greater New York, where she conducted a randomized intervention trial to increase mammography screening for the CDC, and studies of member and provider satisfaction. Dr. Barr has taught at New York University and at Rutgers University and has lectured at Columbia University. She is the recipient of numerous awards, grants and honors. Dr. Barr's primary areas of interest are physicians' views of changes in the health care system, especially related to quality of care, public reporting of health care quality, and mammography utilization.

SHULAMIT L. BERNARD, PhD

Dr. Bernard is a Senior Health Services Researcher and Director of the Health Care Quality and Outcomes Program at the Research Triangle Institute, Research Triangle Park, North Carolina. She has more than 2 decades of clinical and research experience leading and conducting studies in health care quality and outcomes. Dr. Bernard, a nurse and a Geriatric Health Nurse Clinician, has a doctorate in Health Care Policy and Epidemiology from the School of Public Health, University of North Carolina at Chapel Hill and postdoctoral training in health services research. She has led research projects related to health care information and delivery systems, health care quality and outcomes, and public reporting of health care quality measures. Dr. Bernard's research area includes efforts to measure quality of care from the perspective of the beneficiary or consumer of health care services. Currently, Dr. Bernard leads the subgroup analyses of the CAHPS Medicare Fee for Service Survey, an annual survey of over 170,000 original Medicare beneficiaries now in its fifth year of implementation; she is also the principal investigator of a CMS funded project that is examining physician attitude towards, as well as awareness and use of, publicly reported quality data.

CAROL CRONIN, MSW, MSG

Ms. Cronin has over twenty years experience working on health care and aging issues – with a particular interest in consumer health information and Medicare. She serves as a Senior Technical Advisor to the Delmarva Foundation on hospital public reporting issues with funding from the Centers for Medicare & Medicaid Services (CMS). She has also consulted with a number of non-profit organizations and foundations including the California Endowment (evaluation of cultural competence grants), AARP (strategic advice on health navigation and personal health records) and the Office of Disease Prevention and Health Promotion (develop methodology to evaluate the quality of on-line health information).

Previously, Ms. Cronin was appointed as the first director of the Center for Beneficiary Services at the

Health Care Financing Administration (HCFA, now CMS), where she was responsible for planning, implementing and evaluating the National Medicare Education Program (NMEP) from 1998-2000. NMEP included the development and production of a Medicare handbook mailed to 39 million Medicare beneficiaries, a 1-800 call center, a website, and hundreds of community events around the country. Prior to her employment at HCFA, Ms. Cronin was Senior Vice President for Health Pages, a New York City-based consumer health information website primarily made available through large employers. From 1984 to 1994, she worked in leadership positions in Washington D.C. for the employer-based Managed Health Care Association and the Washington Business Group on Health.

Ms. Cronin has chaired and served on numerous technical, planning and advisory committees. She holds an A.B. degree from Smith College and two Masters degrees in Social Work and Gerontology from the University of Southern California.

CATHY E. DUQUETTE. PhD, RN, CPHQ⁶

Dr. Duquette is currently Senior Vice President at the Hospital Association of Rhode Island where she is responsible for quality, performance measurement, public reporting of hospital data, nursing, workforce development, and hospital emergency preparedness issues. Before joining the Hospital Association in January 1999, she worked in hospital quality improvement and has over 15 years of clinical nursing experience in the intensive care unit environment.

Dr. Duquette received Bachelor of Science and Master of Science degrees in nursing from the University of Rhode Island and a PhD in Nursing from the University of Massachusetts – Amherst and Worcester.

Dr. Duquette holds certification as a certified professional in healthcare quality through the National Association for Healthcare Quality. She has served on a number of state and national task forces involving hospital performance measurement and public reporting including multiple work groups for the Rhode Island Performance Measurement and Reporting Program, the Joint Commission's Core Measure Implementation Task Force and the Centers for Medicare and Medicaid Services' (CMS) Technical Expert Panel for Hospital Core Performance Measurement. She also served on the Subject Matter Expert Panel for the SHAPE II Nursing Workforce Study.

JANE GRIFFIN, MPH

Ms. Griffin is the owner of MCH Evaluation, Inc. MCH conducts health surveys and health program evaluations in the field of maternal and child health. Currently MCH is designing and conducting several evaluations for the state of Rhode Island including, Medicaid managed care for healthy families, programs for uninsured, teenage pregnancy and children with special health care needs. MCH designs health indicators from public health data sets (including the vital statistics birth and death files, Behavioral Risk Factor Surveillance System (BRFSS), Pregnancy Risking and Monitoring System [PRAMS]), Medicaid Management Information System (MMIS) and health surveys to conduct pre/post evaluation studies.

Evaluation studies Jane Griffin has conducted using public health data sets include a study on adequacy of prenatal care and birth outcomes from 1993-2002 comparing RI mothers on Medicaid and privately insured mothers, a ten year infant mortality study comparing rates of change of neonatal and post neonatal deaths between infants on public coverage and infants on private coverage and profiles and

⁶ At the time of the Public Reporting TEP, Dr. Duquette was with the Hospital Association of Rhode Island. Currently, she is Vice President of Nursing and Patient Care Services at Newport Hospital.

trends of RI uninsured from 1996- 2004.

Ms. Griffin has worked as the Maternal and Child Health Director at the Providence Health Centers, as an evaluator for the Office of Adolescent Pregnancy Programs, USDHHS and as the Chief of Data and Evaluation for the RI Department of Health. Ms. Griffin's graduate training is in chronic disease epidemiology from Yale. She is a Clinical Teaching Associate in the Department of Community Health at Brown University and has taught the health program evaluation section in the Research Methods course since 1997.

JEANNE McGEE, PhD

Dr. McGee is a health care and communications consultant in Vancouver, Washington. A sociologist with 25 years of experience, she has taught at Duke University, Duke Medical Center, and the University of Oregon. For 19 years, her consulting firm has served a broad range of clients in the public and private sectors. In collaboration with her partner, Mark Evers, PhD, she provides services that include writing and design of health-related materials, custom research including design and implementation of surveys and focus groups, and technical assistance with improvement projects and evaluations. Much of the firm's current work is about health care quality, performance measurement and reporting, and health literacy. Projects include development and testing of ways to report various types of performance measures to audiences of consumers, health professionals, and policy makers. This work includes conducting projects and serving on expert panels that have addressed performance measurement for health plans, hospitals, nursing homes, dialysis centers, home health care, and individual physicians. Other company projects include the development and testing of plain language communication materials for culturally and linguistically diverse audiences with limited reading skills.

Dr. McGee has written books for the Centers for Medicare & Medicaid Services (CMS) that give specific and practical advice on ways to improve written material. Her first book for CMS was written in 1999 (*Writing and Designing Print Materials for Beneficiaries*). The expanded second edition of this book for CMS will be released in the near future. It is a two-volume set. The first volume, *Making Written Material Clear and Effective, Part 1: Guidelines for Writing, Design, and Translation*, gives detailed guidelines for culturally appropriate plain language writing and graphic design. The companion volume explains how to collect and use feedback from readers to improve written material (*Making Written Material Clear and Effective, Part 2: Methods for Testing Material with Readers*).

VINCENT MOR, PhD

Dr. Mor is Chair of the Department of Community Health at the Brown University School of Medicine and formerly served as the Director of the Brown University Center for Gerontology and Health Care Research. Dr. Mor has been on the faculty of the Department of Community Health since 1981 as a research Assistant Professor, becoming tenured in 1987. Together with Professor Alan Morrison, Dr. Mor began the Department's graduate program in 1986 and directed it after Dr. Morrison's death in the early 1990's until becoming chair.

Dr. Mor has been Principal Investigator of over 20 NIH funded grants focusing on the organizational and health care delivery system factors associated with variation in use of health services and the outcomes frail and chronically ill persons experience. He has had multiple grants from the Robert Wood Johnson Foundation, the Pew Memorial Trust and the Retirement Research Foundation as well as contracts from the Centers for Medicare and Medicaid Services (CMS) and the Office of the Assistant Secretary for Planning and Evaluation to evaluate the impact of programs and policies in aging and long-term care including Medicare funding of hospice, the costs and benefits of day hospital treatment of cancer, patient outcomes in nursing homes, the impact of short term case management for cancer

patients, several studies documenting age discrimination in cancer treatment and use of home care services, and a national study of residential care facilities. Over the past 25 years Dr. Mor's research has frequently integrated quantitative and qualitative data, particularly in program evaluations examining the approaches communities, organizations and specific providers use to adjust to health policy changes such as financing and reimbursement or to the emergence of integrated delivery systems.

Dr. Mor was one of the authors of the Congressionally mandated Minimum Data Set (MDS) for Nursing Home Resident Assessment and evaluated its implementation, focusing particularly on the manner it was implemented. Dr. Mor has conducted extensive research on the reliability and validity of the MDS data as used in the field and has pioneered the use of these data to characterize nursing home residents' physical, cognitive and psycho-social functioning, all of which have been used in resident and facility level analyses of the quality of nursing home care in US and international populations. Dr. Mor directed the Brown University component of a CMS contract to develop and validate risk adjusted quality indicators for nursing homes that are currently being tested for public reporting throughout the country.

He recently completed the second 5 years of a MERIT award from NIA for his research on nursing home organizational factors related to facility quality and residents' outcomes and has subsequently received several NIA grants to examine the policy and organizational determinants of hospitalization of nursing home residents and other indicators of the quality of care provided. Dr. Mor was the recipient of a Robert Wood Johnson Foundation Health Policy Investigator award to examine the influence of managed care and integrated delivery systems on the strategic decisions of nursing homes and their quality consequences for residents. Presently, he is examining the effect of state policies and market factors on the quality of care provided nursing home residents, including re-hospitalization, merging primary and secondary data from all facilities throughout the United States. Dr. Mor is seeking to determine whether quality is worse in the states with consistently poor and disjointed long-term care policies.

Dr. Mor was a member of the Secretary of HHS's National Committee on Vital and Health Statistics and the Institute of Medicine Committee on Long-term care Quality. He is a member of the Secretary's Advisory Committee on Health Services Research for the Department of Veteran Affairs. He is currently the Chair of the Long-term care Interest group of AcademyHealth, seeking to expand that organization's interest in and fostering of research on long-term care. He has published over 250 peer reviewed articles and numerous books and book chapters on nursing home quality, hospice, physical functioning, long-term care and cancer treatment patterns among the elderly as well as the organization of AIDS health services. Dr. Mor has published widely on the measurement of quality of life and physical functioning in various chronically ill populations using both previously standardized as well as novel measures of functioning. He has published models pertaining to the measurement of quality in long-term care facilities and lectures widely on this topic. He is a fellow of the American Gerontological Society and is on the editorial board of Health Services Research.

JANET H. MURI, MBA

Ms. Muri has served as Vice President of the National Perinatal Information Center (NPIC) since 1997. She joined NPIC in 1988 serving initially as a consultant, then Data Coordinator, Director of Information Services, and Associate Director prior to her present position. Ms. Muri oversees all collection, processing and analysis of clinical and financial data submitted by NPIC member hospitals and other state, federal and private data sources related to contract work conducted by NPIC. She is the senior principal on many of the NPIC projects including the Georgia Regional Intensive Care Network contract, the JCAHO Core Measure Services activities and the Department of Defense Perinatal Performance Information Activity. Ms. Muri is also a lead consultant on all the Perinatal Consulting Group engagements. She has a Master's in Business Administration from Boston University.

LAUREL PICKERING, MPH

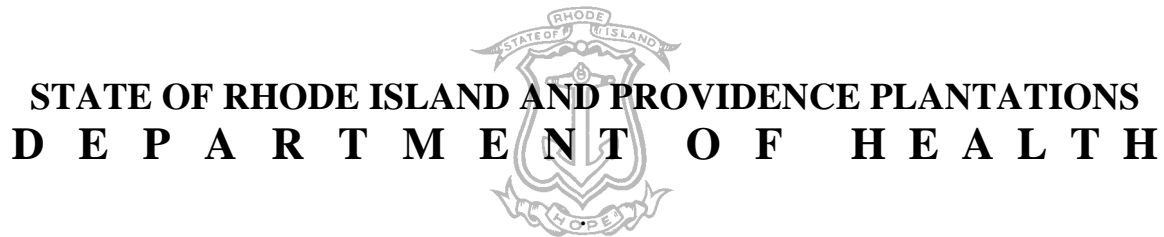
Ms. Pickering is Executive Director of the New York Business Group on Health (NYBGH), a 160 member business coalition representing over 1 million covered lives, committed to market-based health care reform, quality improvement and value-based purchasing. NYBGH also provides the employer's perspective on current health care issues to legislators and healthcare organizations. Since becoming Executive Director in 1996, Ms Pickering has focused on advancing the NYBGH quality initiatives, creating a purchasing alliance for small businesses and initiating direct dialogue between employers and providers. As Executive Director, Ms. Pickering oversees the NYBGH role in the NYS Health Accountability Foundation, a joint venture between NYBGH and IPRO. She is also Chair of the Board of Directors of the NYBGH subsidiary, HealthPass, a consumer-choice purchasing alliance for small businesses. Recently, NYBGH was selected to co-lead the Leapfrog Group regional rollout in the NY Metro area and Ms. Pickering is overseeing that initiative.

Ms. Pickering has served as a researcher for Columbia and Emory Universities on AIDS and risk-related behaviors; has worked for the Centers for Disease Control and Prevention (CDC) on its Business Responds to AIDS program; and served as an assistant to George Pataki, now Governor, in the New York State Assembly.

Ms. Pickering currently serves on the National Committee for Quality Assurance's (NCQA) Purchaser Advisory Council, the Board of Directors of the National Business Coalition on Health, the Teacher Support Network and CDC's Business and Labor Responds to AIDS Board of Business and Labor Partners. Ms. Pickering received her BA from SUNY Albany and MPH from Emory University.

YUN WANG, PhD

Dr. Wang is a senior biostatistician and information specialist at the Center for Outcomes Research and Evaluation, Yale University/Yale-New Haven Health and Qualidigm. He has degrees in mathematics, computer science, criminal law (with concentration in criminal statistics), and information security. He has worked in the healthcare area since 1993, and his research activities primarily involve use of statistical modeling approaches for quality of care research and healthcare-related informatics analyses.

APPENDIX C: Agenda

Safe and Healthy Lives in Safe and Healthy Communities

PUBLIC REPORTING TECHNICAL EXPERT PANEL

**October 24, 2005
AGENDA**

David R. Gifford, MD, MPH (Chair)
Director, Rhode Island Department of Health

Denise Love, RN, MBA (Facilitator)
Executive Director, National Association of Health Data Organizations

Time	Topic	Presenter / Facilitator
8:00-8:30	Pre-meeting breakfast	
8:30-9:00	Welcome & introductions	Dr. Gifford
9:00-10:15	TOPIC 1: Comparing healthcare providers	Ms. Love
	<i>Break</i>	
10:30-11:45	TOPIC 2: Using longitudinal data	Ms. Love
11:45-12:45	Lunch	
12:45-2:00	TOPIC 3: Creating composite measures	Ms. Love
	<i>Break</i>	
2:15-3:45	TOPIC 4: Consumer data accessibility	Ms. Love
3:45-4:00	Wrap-up	Dr. Gifford

This meeting is co-hosted by the following organizations at Quality Partners' office in Providence, RI:



APPENDIX D: Topic Guide**TOPIC 1: Comparing healthcare providers**

When comparing providers, we need to decide which comparison group to use and how to select a comparative group (e.g., benchmarking, comparative ratings). Once comparative groups are selected, we must decide how to identify clinically significant differences between groups.

- 1) How do you select an appropriate data source to compare providers?
- 2) How should we identify significant differences and account for measurement variation?
- 3) How do we create meaningful benchmarks?
- 4) When should comparative measures or benchmarks be used?

TOPIC 2: Using longitudinal data

Many quality indicators are cross-sectional and are not trended or aggregated over time. Both providers and consumers desire the ability to examine trends. Additionally, aggregating over time may increase accuracy and help to address concerns about variation and small sample sizes.

- 1) How should we present quality indicators over time?
- 2) How do we determine meaningful change in score? (Is an absolute increase from 40% to 45% the same as an increase from 75% to 80%?)
- 3) Which statistics are appropriate to determine meaningful change?
- 4) How can we aggregate quality data over time?
- 5) When is aggregating over time preferable to presenting a snapshot of provider quality?

TOPIC 3: Creating composite measures

For measures focusing on a single clinical outcome, evidence suggests that health care consumers desire a single, aggregate measure of healthcare quality. Moreover, consumers may be better able to understand and use a composite measure.

- 1) What methods should we use to create composite measures?
- 2) How can we create valid and reliable composite measures?
- 3) When should we use composite measures?
- 4) How should we use composite measures? (Should they be used for pay-for-performance?)

TOPIC 4: Consumer data accessibility

When we provide data to the public, we must provide it when consumers need it and in a format that they can understand. It is important to continue efforts to assess and consolidate the various methods of data display. In addition, the results of cognitive research may help us choose a data format.

- 1) How and when do we make data available to the public?
- 2) How do we provide data in a format that consumers understand?
- 3) How do we choose among the different data display formats? Is one format preferable?

APPENDIX E:
Meeting Transcript
(Separate Document, Available on Request)